

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 84-51

WASTE DISCHARGE REQUIREMENTS FOR:

CALIFORNIA DEPARTMENT OF CORRECTIONS
CALIFORNIA MEDICAL FACILITY
WASTE EQUALIZATION POND
VACAVILLE, SOLANO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. The California Department of Corrections, California Medical Facility, Vacaville, hereinafter discharger submitted a Report of Waste Discharge dated May 9, 1984, additional information in letters dated July 2 and July 9, 1984, and an engineering report.
2. The discharger currently discharges an average flow of 0.75 million gallons per day (mgd) of wastewater from 3600 inmates through a 15 inch trunk sewer to the Vacaville city sewerage system. Short-term peak flow is about 1.5 mgd, and capacity of the trunk sewer is 1.6 mgd. Waste is comminuted and metered in a facility on the discharger's property and discharged to the trunk sewer.
3. The discharger is building additional prison facilities on site which will house an additional 300 inmates in August 1984, 300 more in September, November 1984, 600 in January 1985, and 489 more in March 1985. A maximum of 5889 inmates may be housed on site in the new and existing prison facilities.
4. It is estimated that daily peak flow then will be 2.46 mgd which exceeds the 1.6 mgd capacity of the trunk sewer to the city sewer system. The discharger proposes to construct a flow equalization pond that will store the peak flow in excess of what the sewer will take. The pond will empty when flow again becomes less than the sewer capacity.
5. The 0.48 mgd of sewage from the additional 2289 inmates in the new facilities will be comminuted and pumped to the equalization pond. The equalization pond will be connected to the trunk sewer carrying waste from the present inmates downstream of the present comminution facilities.
6. The equalization pond will extend to 12 feet below the ground level; contain a minimum of seven feet and a maximum of nine feet of sewage and discharge by gravity to the trunk sewer. The pond dike will extend to two feet above ground level.
7. The bottom and sides of the pond will be lined with two feet of clay having a permeability of less than 1×10^{-6} centimeters/second.

8. Four 15 horsepower floating aerators with the combined oxygen delivery capacity of 2,500 pounds per day will be installed. The discharger reports that an aerobic layer will be maintained over the pond at all times thus preventing nuisance odor. Dikes will extend five feet above the highest pond level so as to help contain any aerosols.
9. The flow equalization pond will be utilized only during the period between initial occupation of the new prison facilities in August 1984 and scheduled completion of a new trunk sewer in June 1985 to the Vacaville wastewater treatment plant, a period of up to ten months from the date of adoption of this order.
10. The City of Vacaville is responsible for accepting and handling the discharger's wastewater and the City has an NPDES Permit from the Central Valley Regional Board. Therefore, Waste Discharge Requirements are needed from this Board only while the equalization pond is utilized because it has the potential to cause pollution and nuisance.
11. Before the first connection to the City sewer was made in 1983, wastewater disposal was governed by Waste Discharge Requirements Orders Nos. 76-66 and 75-37 which allowed on site waste disposal and reclamation.
12. The Board adopted a revised water quality control plan for San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for ground water and Union Creek, Suisun Marsh and contiguous waters.
13. The beneficial uses of Union Creek, Suisun Marsh and contiguous waters are:
 - ° Water Contact Recreation
 - ° Non-Contact Water Recreation
 - ° Wildlife Habitat
 - ° Preservation of Rare and Endangered Species
 - ° Warm Fresh Water and Estuarine Habitat
 - ° Agricultural Supply
 - ° Sport Fishing
 - ° Fresh Water Replenishment
 - ° Fish Spawning and Migration
14. The beneficial uses of ground water in the City of Vacaville area are:
 - ° Domestic water supply
 - ° Agricultural water supply

15. An Operations and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.
16. The discharger certified a final Environmental Impact Report (EIR) in December 1983 for its medical facility expansion project in accordance with the California Environmental Quality Act (Public Resources Code, Section 2100 et. seq.). It discussed the institution's wastewater disposal in a general way but did not identify any adverse effects of the on site wastewater facilities.
17. The discharger and interested agencies and persons have been notified of the Board's intent to issue waste discharge requirements for the proposed discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the flow equalization pond or from any of the collection system or pump stations in the discharger's sewerage system is prohibited.
2. The average monthly wastewater flow shall not exceed 1.23 mgd.
3. The collection, storage or pumping of wastewater shall not cause degradation of groundwater suitable for domestic use or cause any quality parameter that would make groundwater unsuitable for irrigation use.
4. The reclamation or spray disposal of wastewater formerly permitted under Orders Nos. 76-66 and 75-37 is prohibited.
5. Discharge of wastewater to the equalization pond after the new trunk sewer is completed or, at the latest, December 31, 1985 is prohibited.
6. Public access to or use of the equalization pond area before the pond has been drained and allowed to remain empty for at least one year is prohibited.

B. Specifications

1. Wastewater at the surface of the equalization pond shall meet the following quality limits at all times:

In any grab sample:

Dissolved Oxygen	2.0 mg/l minimum
Dissolved Sulfides	0.1 mg/l maximum
pH	6.0 minimum
	9.0 maximum

2. A minimum freeboard of five feet shall be maintained in the equalization pond at all times.
3. The equalization pond shall be protected from erosion, washout, and flooding from the maximum flood having a predicted frequency of once in 100 years.
4. Neither the collection, storage or pumping of waste shall create a nuisance as defined by California Water Code Section 13050 (m).
5. The bottom and sides of the equalization pond shall be lined with two feet of compacted clay having a permeability of less than 1×10^{-6} cm/sec or equivalent. The discharger shall demonstrate to the satisfaction of the Executive Officer that the specified liner or its equivalent has been installed prior to commencement of discharge to the pond.

C. Provisions

1. The requirements relating to reclaimed wastewater in Orders Nos. 76-66 and 75-37 are no longer applicable. Order No. 76-66 in its entirety and Reclaimed Wastewater Use Specifications A, Reclaimed Wastewater Use Prohibitions B, and Provisions D.1., D.2., and D.4. of Order No. 75-37 are hereby rescinded. The requirements of Order No. 75-37 relating to solid waste disposal shall remain in effect.
2. The discharger shall comply with all sections of this order except Prohibition A.5. immediately upon adoption.
3. The discharger shall comply with Prohibition A.5. in accord with the following schedule:

<u>Task</u>	<u>Completion Date</u>
(1) Complete design of new trunk sewer	September 15, 1984
(2) Begin construction	December 15, 1984
(3) Complete construction	June 15, 1985
(4) Full compliance	August 15, 1985

The discharger shall submit a quarterly status report beginning September 15, 1984 and continuing until full compliance is achieved. If noncompliance with a specific schedule date or task is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the discharger will be in compliance. The discharger shall notify the Board by letter when it has returned to compliance with the time schedule.

4. The discharger shall submit an operations and maintenance manual that is acceptable to the Executive Officer by September 1, 1984.
5. The discharger shall submit its contingency plan by October 15, 1984 as required by Board Resolution No. 74-10. The discharger of pollutants in violation of this Order where the discharger has failed to develop and /or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
6. The discharger shall post signs prohibiting public access to the equalization basin.
7. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.
8. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.
9. This Order expires January 1, 1986. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on August 15, 1984.

ROGER B. JAMES
Executive Officer

Attachments:

Standard Provision &
Reporting Requirements, April 1977
Self-Monitoring Program
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

California Department of Corrections

California Medical Facility

Vacaville, Solano County

NPDES NO. CA _____

ORDER NO. _____ 84-51 _____

CONSISTS OF

PART A

and

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. Collection

Station	Description
A-001 thru A-'n'	At any point or points in the facilities at which all waste tributary to the system is present and preceding any storage.

B. Equalization

Station	Description
P-001	At a point within 1 foot of the surface just off shore at one end of the pond.
P-002	At a point within 1 food of the surface just off shore at the opposite end of the pond.

C. Monitoring Wells

Station	Description
W-001	5 feet from the SE corner of the outside of the pond dike.
W-002	5 feet from the NW corner of the outside of the pond dike.

D. Pond Levee

Station	Description
L-001 thru L-'n'	At the corner and mid-points of the longer dikes around the pond.

II. Schedule of Sampling and Analysis

- A. The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program;

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 84-51.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Attachment:
Table I (2 pages)

Effective Date August 28, 1984

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

[illegible]

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-001 to A-00n	P-001	P-002	L-001 to L-00n	OV-1 to OV-n	W001	W002				
TYPE OF SAMPLE											
Mercury (mg/l & kg/day)											
Nickel (mg/l & kg/day)											
Zinc (mg/l & kg/day)											
Phenolic Compounds (mg/l & kg/day)											
All Applicable Standard Observations				D	E						
Bottom Sediment Analyses and Observations											
Total Ident. Chlor. Hydro- carbons (mg/l & kg/day)											
Chloride						W/M ⁽¹⁾	W/M ⁽¹⁾				
Coliform						W/M ⁽¹⁾	W/M ⁽¹⁾				
Nitrogen Series						W/M ⁽¹⁾	W/M ⁽¹⁾				

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
 C-24 = composite sample - 24-hour
 C-X = composite sample - X hours
 (used when discharge does not
 continue for 24-hour period)
 Cont = continuous sampling
 DI = depth-intergrated sample
 BS = bottom sediment sample
 O = observation

FREQUENCY OF SAMPLING

E = each occurrence
 H = once each hour
 D = once each day
 W = once each week
 M = once each month
 Y = once each year

2/H = twice per hour
 2/W = 2 days per week
 5/W = 5 days per week
 2/M = 2 days per month
 2/y = once in March and
 once in September
 Q = quarterly, once in
 March, June, Sept.
 and December

TYPES OF STATIONS

I = intake and/or water supply stations
 B = bottom sediment stations
 E = waste effluent stations
 C = receiving water stations
 G = groundwater stations
 L = basin and/or pond levee stations

2H = every 2 hours
 2D = every 2 days
 2W = every 2 weeks
 3M = every 3 months
 Cont = continuous

(1) Weekly samples shall be collected
 for the first month; frequency may
 then be reduced to monthly.